

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) An-isolated library of structurally-constrained cyclic peptide[[s]], each-said cyclic peptide having an amino acid sequence of C1-A1-A2- (A3)_n-A4-A5-C2 (SEQ ID NO: 1), wherein

C1 and C2 are cysteines;

A1, A2, A3, A4, and A5 are naturally occurring L-amino acids;

A1 and A5 are independently amino acids W, Y, F, H, I, V, or T;

A2 is amino acid W;

A3 is any naturally occurring L-amino acid and n is an integer that is 3, 4, 5, 6, 7, or 8, 9, 10, 11, or 12;

A4 is amino acids W or L; and

C1 and C2 together form a disulfide bond thereby forming a cyclic peptide; the amino terminus of C1 is optionally protected with an amino protecting group; and the carboxy terminus of C2 is optionally protected with a carboxy protecting group; and wherein the cyclic peptide stabilizes a β -turn, β -hairpin, β -bulge, or γ -turn sequence.

2. (Currently Amended) The cyclic peptide library of claim 1, wherein A1 or A5 is a β -branched residue having two non-hydrogen substituents on the β -carbon of the amino acid residue.

3. (Currently Amended) The cyclic peptide library of claim 1, wherein A1 or A5 is T.

4-6. (canceled)

7. (currently amended) The cyclic peptide library of claim 1, wherein A2 and A4 are W.

8. (Currently Amended) The cyclic peptide library of claim 1, wherein n is at least 4.

9. (cancelled)

10. (currently amended) The cyclic peptide library of claim 1 9, wherein n is 4.

11. (Currently Amended) The cyclic peptide library of claim 10, wherein (A3)₄ is EGNK, ENGK, QGSF or VWQL.

12. (Currently Amended) The cyclic peptide library of claim 11, wherein A1 is T and A5 is T.

13-19. (canceled)

20. (currently amended) An isolated plurality of cyclic peptide[[s]] having a reverse turn secondary structure, ~~each~~ said cyclic peptide having an amino acid sequence of C1-A1-A2-(A3)_n-A4-A5-C2 [SEQ ID NO:1], wherein

C1 and C2 are cysteines;

(A3)_n is a library of natural or synthetic amino acids where n is 3 to 8 12, inclusive;

A1 and A5 are independently amino acids W, Y, F, H, I, V, or T;

A2 is a non hydrogen bonded site located at a position two residues from the N terminal cysteine and is amino acid W;

A4 is a cross pair non hydrogen bonded site with A2 and is amino acid W or L; and

C1 and C2 together form a disulfide bond thereby forming a cyclic peptide, and
wherein the reverse turn secondary structure is a β -turn, β -hairpin, β -bulge, or γ -turn sequence..

21. (Cancelled)

22. (Currently Amended) The cyclic peptide isolated library of claim 20 is, wherein the amino terminus of Cysteine C1 is protected with an acetate and the carboxy terminus of Cysteine C2 is protected with an amine.

23. (currently amended) An isolated library of structurally-constrained cyclic peptide[[s]], wherein each said cyclic peptide consists of the amino acid sequence X1-C1-A1-A2- (A3)_n-A4-A5-C2-X2, wherein

C1 and C2 are cysteines;

A1, A2, A3, A4, and A5 are naturally occurring L-amino acids;

A1 and A5 are independently amino acids W, Y, F, H, I, V, or T;

A2 and A4 are amino acid W;

A3 is any naturally occurring L-amino acid and n is an integer that is 3, 4, 5, 6, 7, or 8, 9, 10, 11, or 12;

X1 and X2 each consists of any naturally occurring amino acid and each is independently a peptide of about 1 to 50 amino acids; and

C1 and C2 together form a disulfide bond thereby forming a cyclic peptide; the carboxy terminus of C1 is optionally protected with a carboxy protecting group; and the amino terminus of C2 is optionally protected with an amino protecting group, and wherein the cyclic peptide stabilizes a β -turn, β -hairpin, β -bulge, or γ -turn sequence.

24. (new) The cyclic peptide of claim 20, wherein A1 or A5 is T.

25. (new) The cyclic peptide of claim 20, wherein A2 and A4 are W.

26. (new) The cyclic peptide of claim 20, wherein n is at least 4.

27. (new) The cyclic peptide of claim 20, wherein n is 4.

28. (new) The cyclic peptide of claim 20, wherein (A3)₄ is EGNK, ENGK, QGSF or VWQL.

29. (new) The cyclic peptide of claim 28, wherein A1 is T and A5 is T.
30. (new) The cyclic peptide of claim 23, wherein A1 or A5 is T.
31. (new) The cyclic peptide of claim 23, wherein A2 and A4 are W.
32. (new) The cyclic peptide of claim 23, wherein n is at least 4.
33. (new) The cyclic peptide of claim 23, wherein n is 4.
34. (new) The cyclic peptide of claim 23, wherein (A3)₄ is EGNK, ENGK, QGSF or VWQL.
35. (new) The cyclic peptide library of claim 34, wherein A1 is T and A5 is T.